7. General Error Function

ı When an error occurs, this function starts to keep generating error melody sounds and displays error indicators as shown in the followings per corresponding error by blinking in 0.5sec interval until the error status is completely cleared out. In this case, all the driving devices are turned off until the error is cleared out.

1. WATER SUPPLY ERROR
- Display shows ' E1' .
- Water Supply Error occurs when water level frequency does not show changes more than 100Hz or water is not supplied up to the water level presetting for 20 min or more at the time of initial water supply.
- The error status can be cleared by turning POWER S/W OFF and resuming the POWER ON initial status.

2. WATER DRAIN ERROR
- Display shows ' E2' .
- In case the water level frequency is 24.5KHz or less in the initial phase of UNB-detecting cycle.
- Water Drain error can be cleared by turning POWER S/W OFF and resuming the POWER ON initial status.

3. OVER-FLOW ERROR
- Display shows ' E3' .
- Over-Flow error occurs when the water level is in abnormal operation. It can be cleared by turning POWER S/W OFF. Water is drained prior to POWER S/W OFF and it is forced to be drained for 2 min if a frequency of more than 24.5 KHz is detected.

4. DOOR OPEN ERROR
- Display shows ' door' ,'Ed'
- Door Open error can be cleared by closing the door.

5. UNBALANCE ERROR
- Display shows ' E4' .
- Laundry load is unbalanced; loosen any tangled laundry.
- If only one item of clothing needs washing, such as a bathrobe or jeans, the final spin result might be unsatisfactory and an "E4" error message will be shown in the display window.
- Unbalance error is cleared by POWER S/W OFF and by resuming the POWER ON initial status.

6. WATER HEATER ERROR
- Display shows ' E5,E6' .
- In case the water temperature rises by 7°C or more in 1 min. or by 2°C less in 10 min after heating is started.
- It can be cleared by turning POWER S/W OFF.

7. ASS' Y PRESSURE S/W ERROR

* Generated Frequency Signal of WATER LEVEL(W/L) S/W (KHz)

Level	Low Level	High Level
Abnormal W/L Frequency	30.00 KHz	15.00 KHz

- If the same signal as the above table is detected for more than 5 seconds, it is a PRESSURE S/W Error.
- When the error occurs, water drain pump will operate for 3 min. and then turn off the water drain pump. Then the display shows ' E7' indicating a pressure s/w error indicator.

8. ABNORMAL WATER TEMPERATURE ERROR

Course	Water Temp
Delicate	50°C or more
Wool	50°C or more

- In case the water temperature is 50°C or more in Delicate and Wool course.
- At the time of initial water supply, if the water temperature is not appropriate, water starts to be drained and it is forced to be drained for 2 min when the abnormal frequency of 24.5KHz is detected.
- Display shows ' E8' .
- This error can be cleared by POWER S/W OFF.

9. WATER LEAKAGE ERROR (E9)
- Water Leakage error occures when water is drained naturally after washing program starts.

7. General Error Function

10. Tacho Error
- This error occurs in case motor thaco is out of order or tacho siganals inputted are fewer than 2
- "EA" displayed
- This error can be cleared by power s/w off

11. Motor Triac short Error
- This error occurs in case over 300 per 1 sec tacho signals are inputted power S/w should be off.
- "Eb" diplayed.
- This error can be cleared by power s/w off

12. Thermistor error
- This error occurs, when Thermistor circuit is abnormal or the detected electrical volt is 0.2v below or 4.5v over
- "Ec" displayed
- This error can be cleared by power s/w off

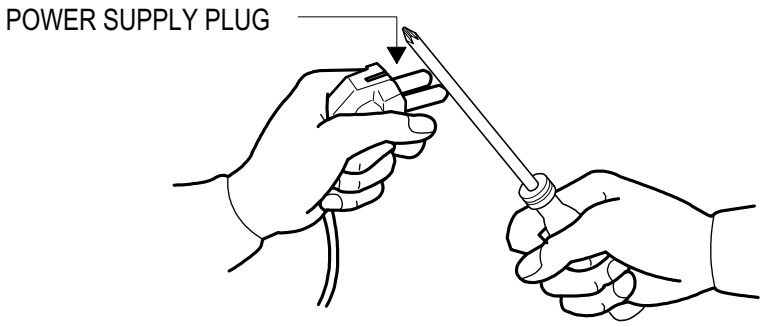
8. Trouble Diagnosis

- As the micom wash machine is configured of the complicate structure, there might be the service call. Below information is prepared for exact trouble diagnosis and suitable repair guide.

Caution for the Repair and Replacement

Please follow below instruction for the trouble diagnosis and parts replacement.

1) As some electronic components are damaged by the charged static electricity from the resin part of wash machine or the human body, prepare the human body earth or remove the potential difference of the human body and wash machine by contacting the power supply plug when the work contacting to PCB is executed.



2) Since AC220~240V is applied to the triac T1 and T2 on P.C.B, the electric shock may occur by touching and be careful that the strong and weak electricity are mixed.

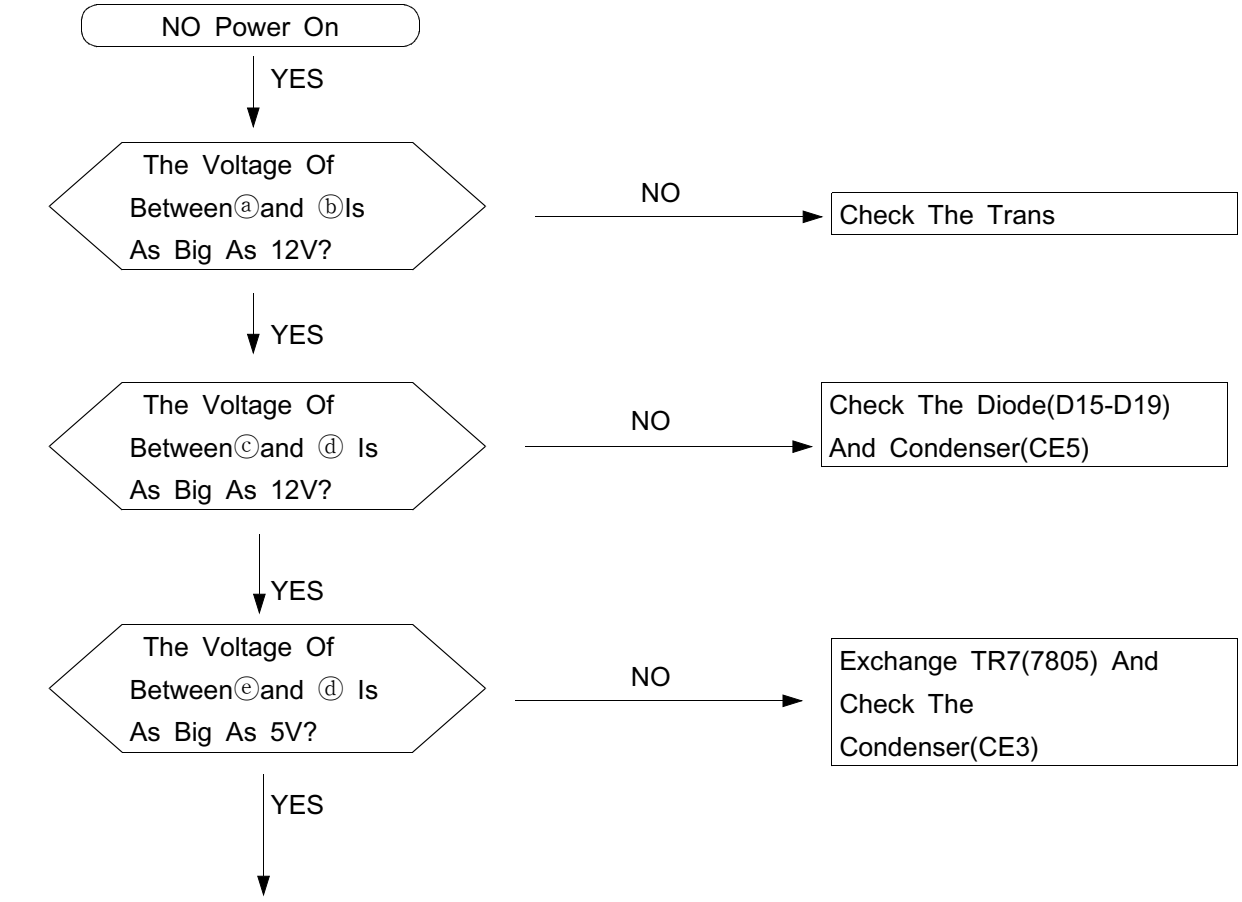
3) As the P.C.B assembly is designed for no trouble, do not replace the P.C.B assembly by the wrong diagnosis and follow the procedure of the trouble diagnosis when the micom is not operated normally.

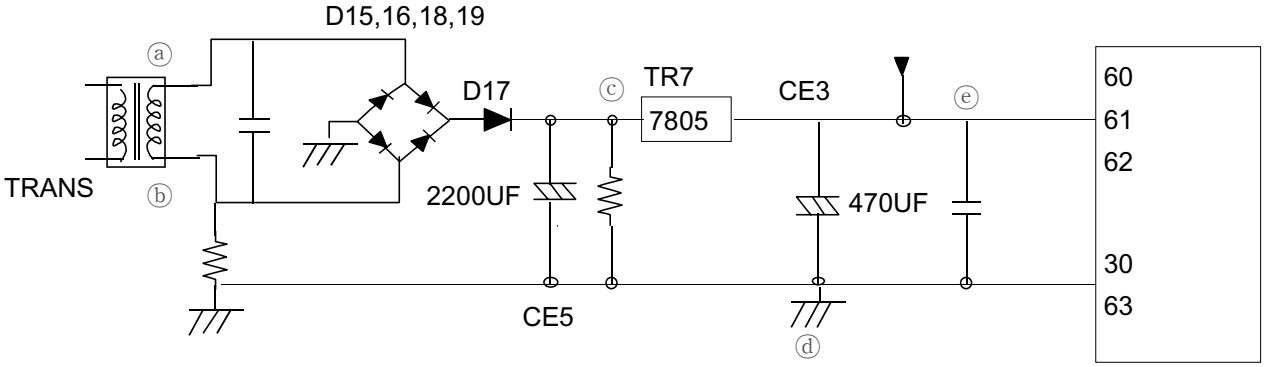
8-1. Trouble Diagnosis

No	Item	Cause and treatment
1	The power is not supplied	- Is the PCB connector connected well? - Is the voltage normal? - Is the power supply plug connected well? - Is the noise filter connected well? - Is the secondary output of the power supply transformation normal? - Is the fuse disconnected? (option) • If above points are not found, the PCB assembly is out of order. Replace it.
2	The water is not supplied.	- Is the knob open? - Did you push START/PAUSE button after selecting the course? - Is the water supply valve connected well? - Is the winding of the water supply valve continuous? - Is the connection and operation of the pressure switch normal? • If above points are not found, the PCB assembly is out of order. Replace it.
3	The wash does not start though the water supply is stopped.	- Is the connection and operation of the pressure switch normal? - Is the pressure switch hose damaged so that the air is leaked? - Is the pressure switch hose bent? - Check the operation of the water level switch. • If above points are not found, the PCB assembly is out of order. Replace it.
4	The drum does not rotate during washing.	- Is the belt connected well? - Is the winding of the motor continuous? (Rotor winding, stator winding, generator) - Is the motor protector normal? • If above points are not found, the PCB assembly is out of order. Replace it.
5	The drum rotates by one direction during washing. (The drum rotates to one direction for SPIN.)	- The PCB assembly is out of order. Replace it. (Inversion relay open trouble)
6	Drainage problem.	- Is the drainage hose bent? - Is the winding of the drainage pump continuous? - Is the drain filter clogged by the waste? • If above points are not found, the PCB assembly is out of order. Replace it.
7	Dehydration problem.	- The unbalance is detected. - Put in the laundry uniformly and start again.
8	Abnormal noise during SPIN.	- Is the pulley nut loosen? - Is the transport safety device removed? - Is the product installed on the level and stable place? (Little noise may be generated during the high-speed SPIN.)
9	Leak breaker or current/leak breaker is down during washing.	<When the leak breaker and current breaker is installed separately> - When the leak breaker is down, check and make the earth of the outlet. - When the current is down, the current is leaked. <Is the breaker down when the leak/current breaker is combined?> - Check the rated capacity of the current and leak breaker. The current breaker may be down due to the lack of the current when the wash machine and other apparatus are used. In this case, execute the cold water wash to check whether the current capacity is lack.
10	The heating is not executed.	- Is the wash heater terminal unplugged? - Is the wash heater normal? - If above points are not found, the PCB assembly is out of order. Replace it.

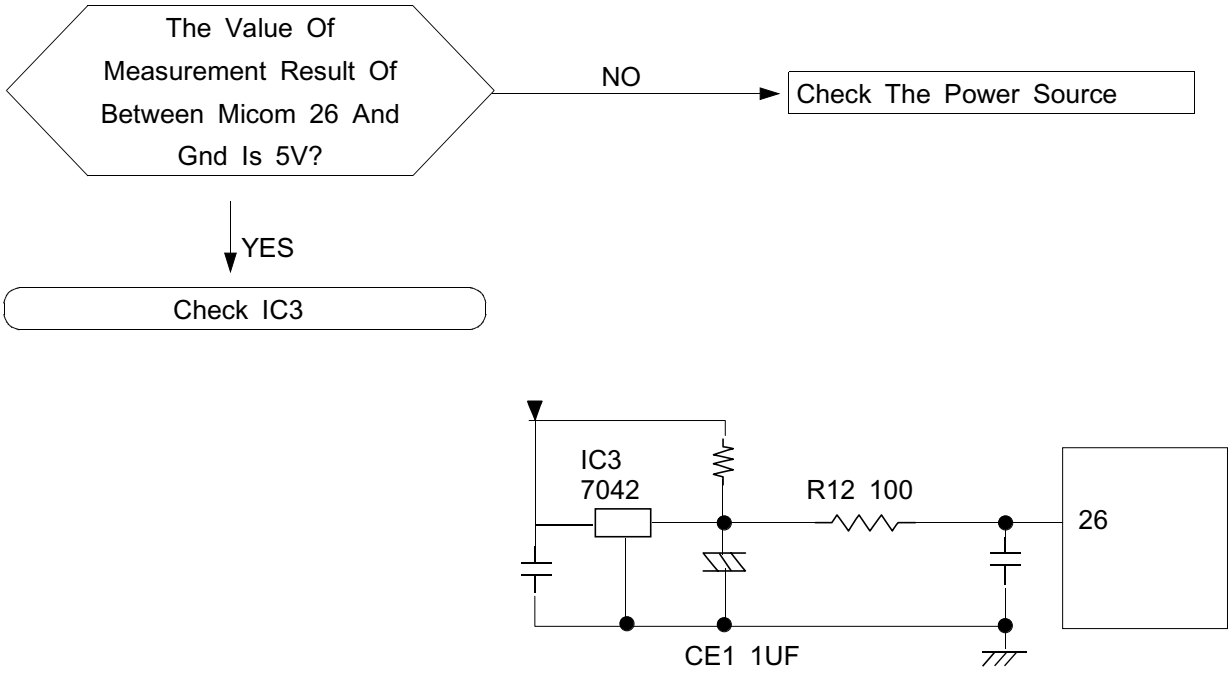
8-2 . Problem Checking And Method Of PCB

8-2-1 The Part Of Power Source

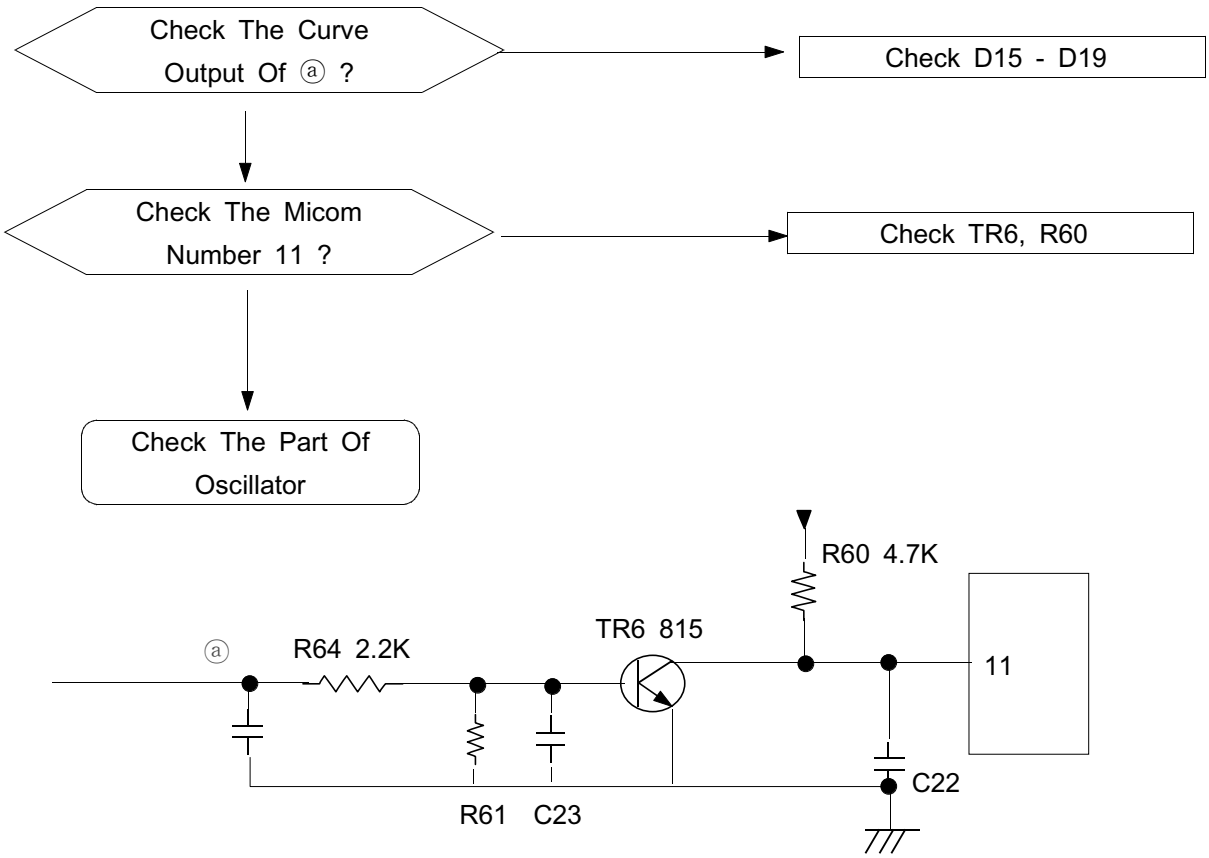

NO Power On
YES
The Voltage Of Between ⓐ and ⓑ Is As Big As 12V?
NO
Check The Trans
YES
The Voltage Of Between ⓒ and ⓓ Is As Big As 12V?
NO
Check The Diode(D15-D19) And Condenser(CE5)
YES
The Voltage Of Between ⓔ and ⓓ Is As Big As 5V?
NO
Exchange TR7(7805) And Check The Condenser(CE3)
YES



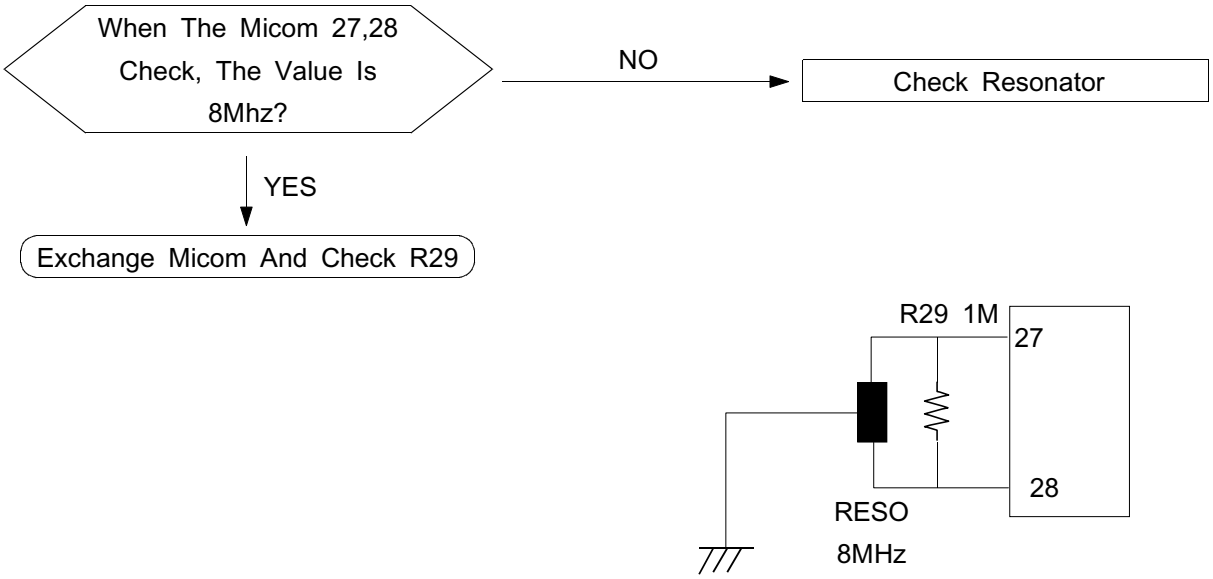
8-2-2. Reset Part



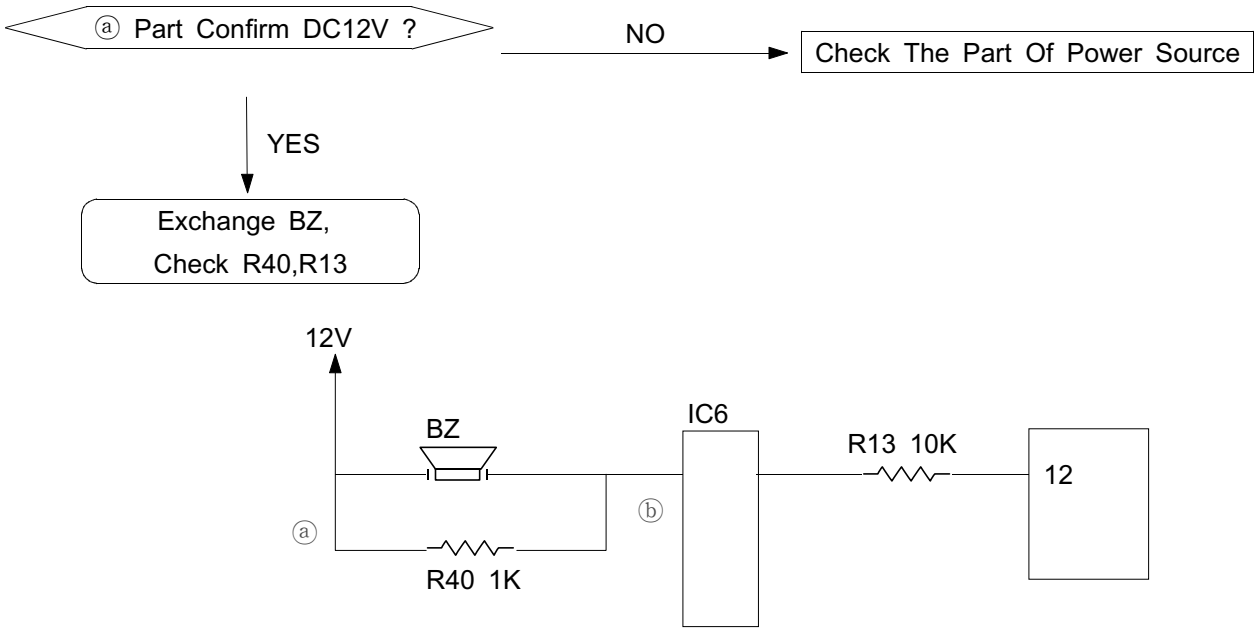
8-2-3. Interrupt Part



8-2-4. Checking The Part Of An Oscillator



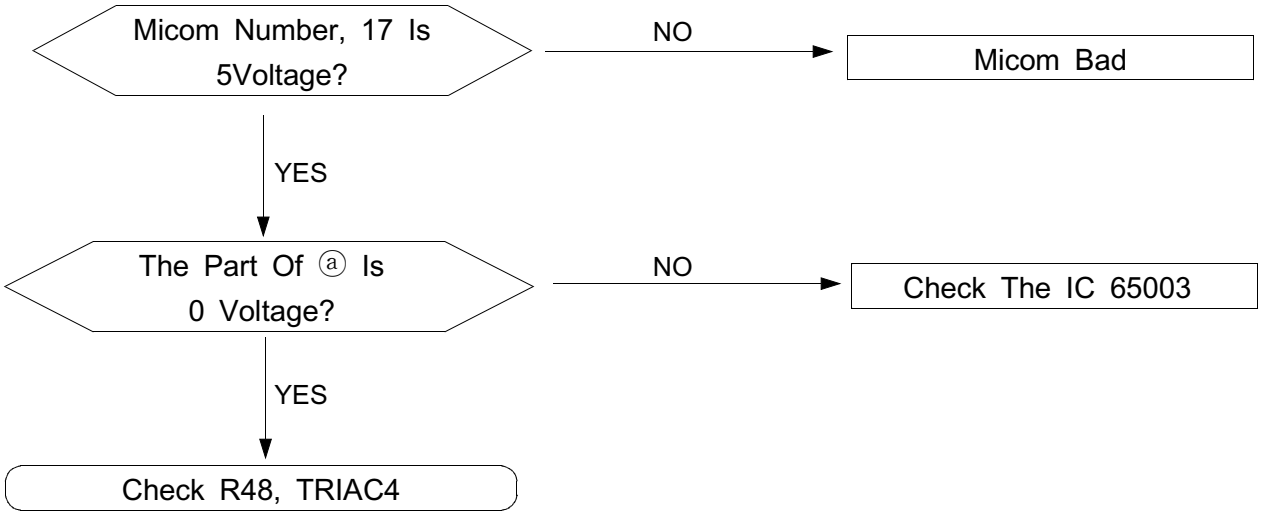
8-2-5. Check The Part Of Buzzer

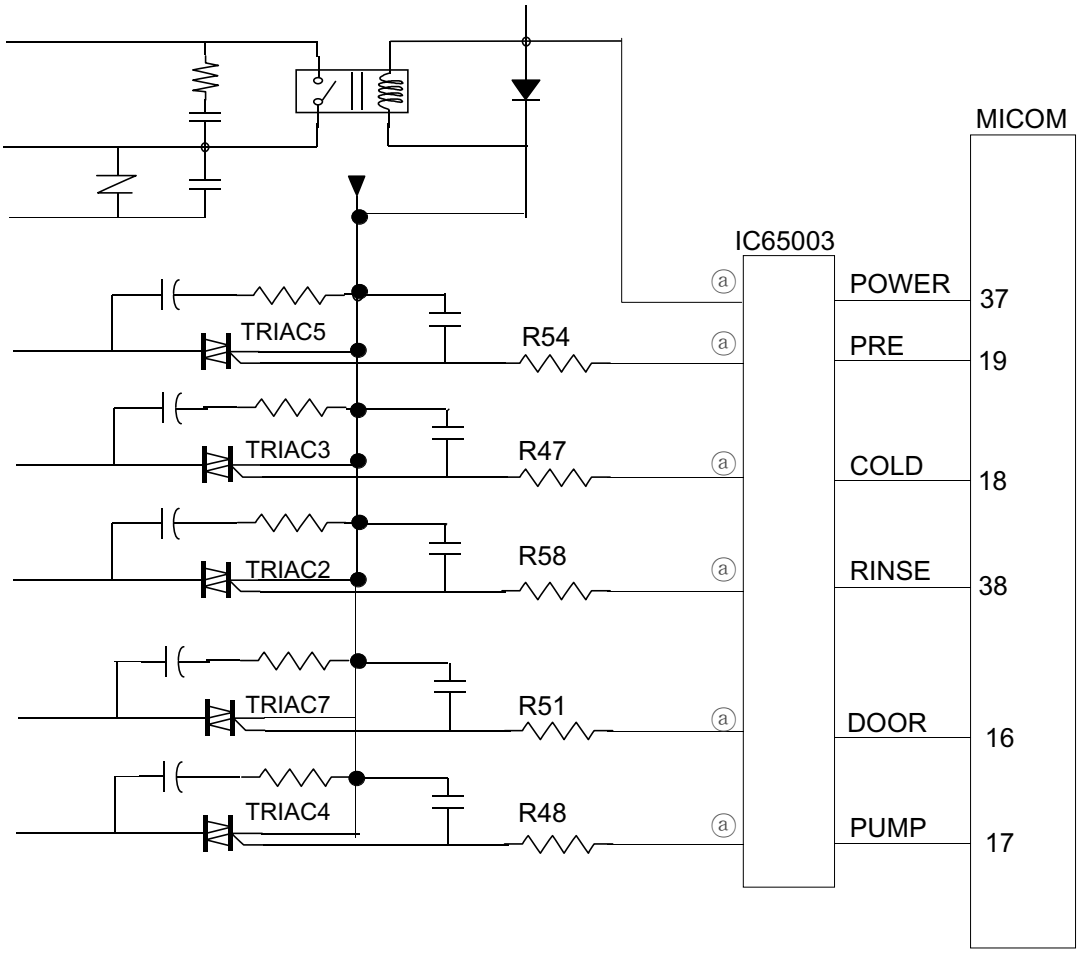


8-2-6. Driving Part Checking

◆ **Confirm The Output Of DC5V, When The Every Part Of Micom Number Check, According To The Some Problem Condition**

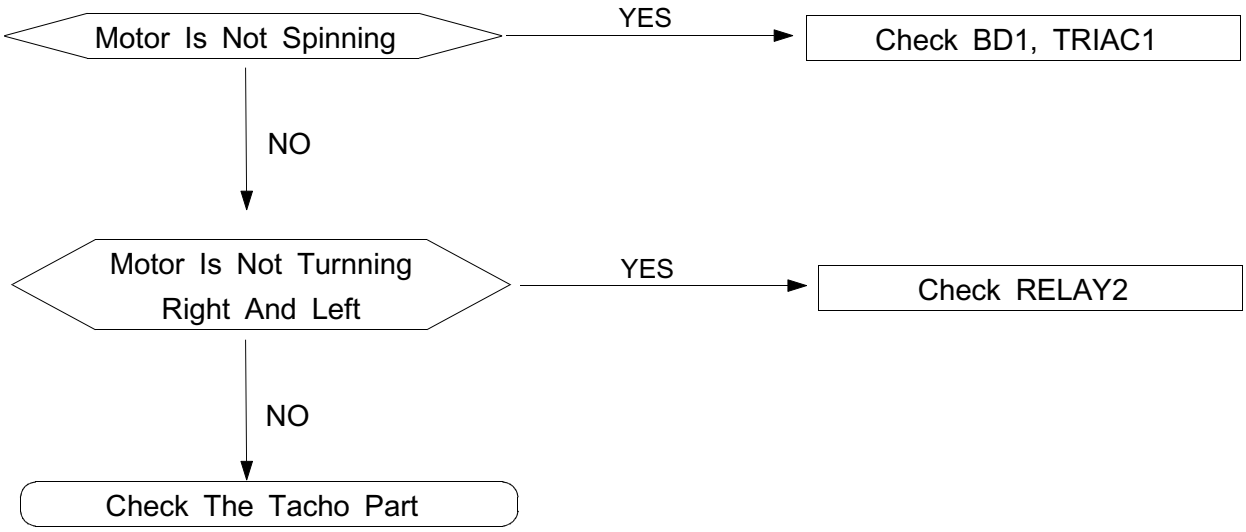
ex) When The Drain Is Not Operating But Pump Motor Is Operating, Check The 5Voltage Of Micom

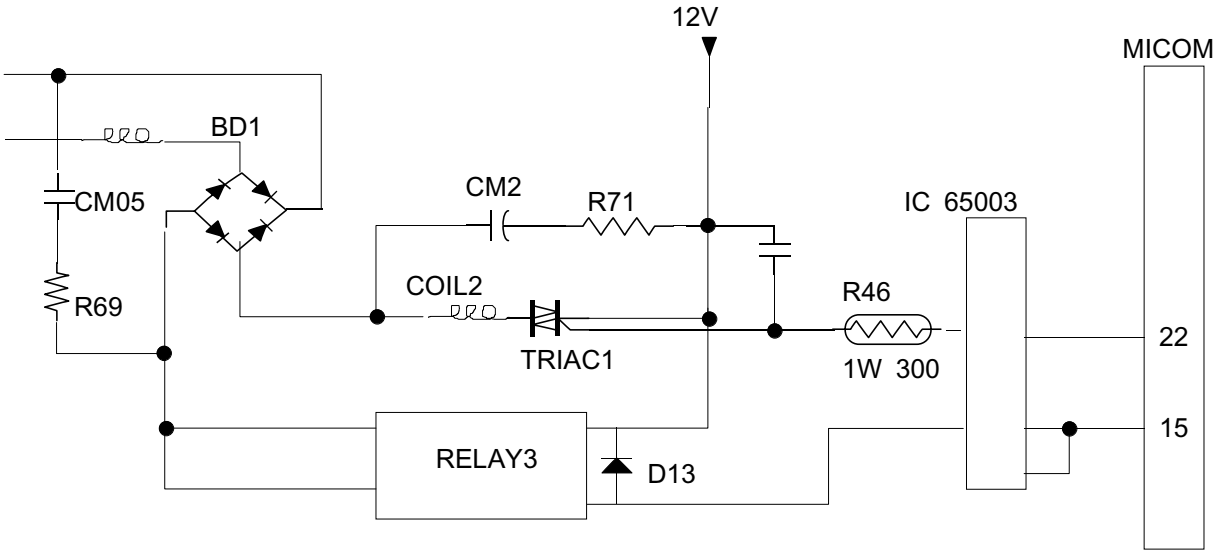




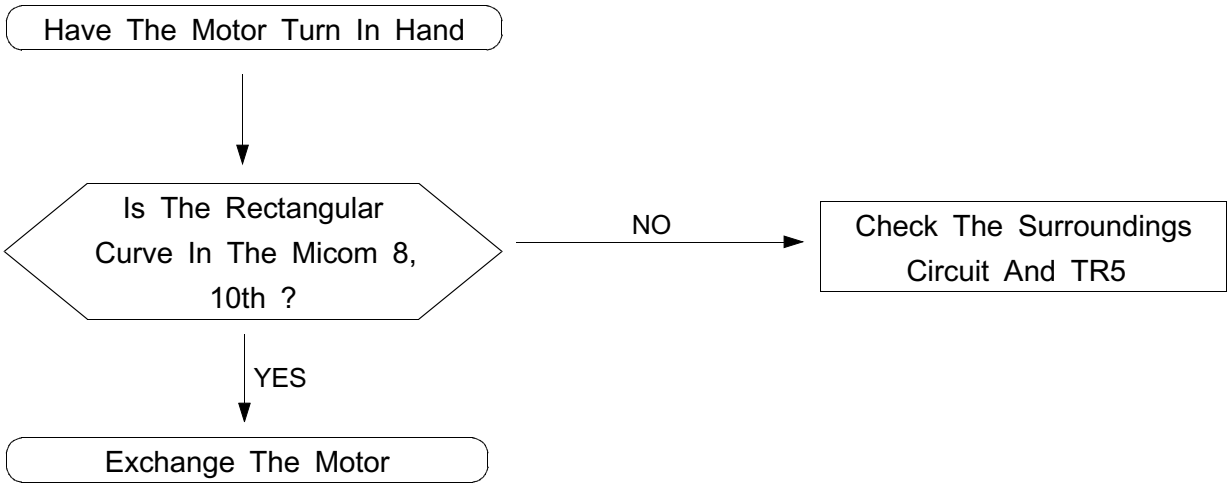
※ Check The Micom 18th In The Above Method When The Cold Water Is Bad

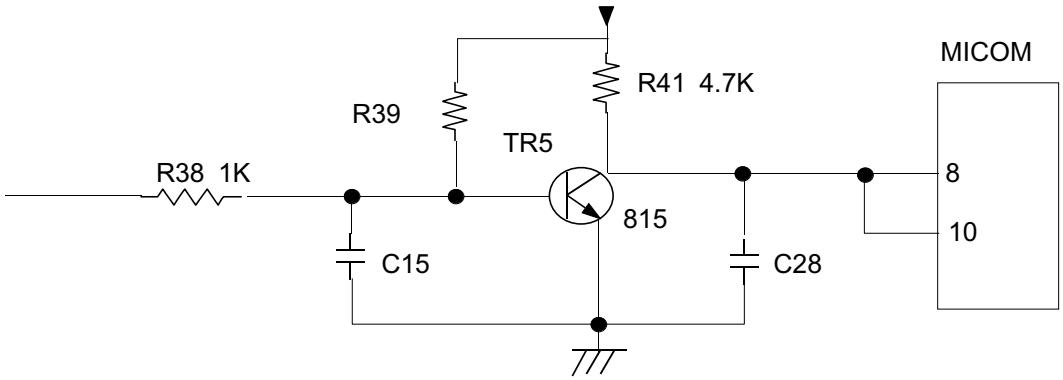
8-2-7. Confirm The Driving Part Of Motor





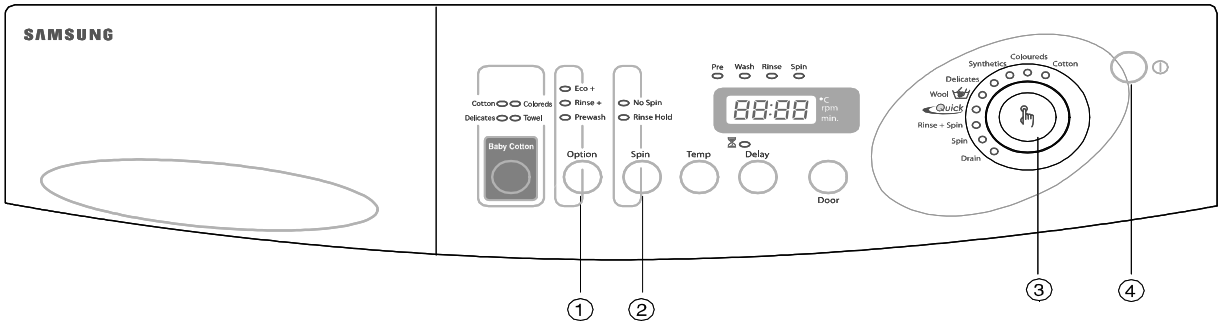
8-2-8. Checking The Tacho Part


Have The Motor Turn In Hand
Is The Rectangular Curve In The Micom 8, 10th ?
NO
Check The Surroundings Circuit And TR5
YES
Exchange The Motor



9. Test Mode

F1215J/F1213J/F1015J/F1013J



1. Driving Compartment Test Mode

A. Hold down " 1" and " 2" keys simultaneously and then press POWER S/W " 4" on.
(Whole lamps turn on and display show " tl" after 3 Seconds.)

B. The driving compartment can be tested when you press " 3" key right after entering into the initial stage of the TEST MODE.

• Driving Compartment Test

Pre-wash VALVE ON(0.3sec) → OFF(0.3sec) → COLD VALVE ON(0.3sec) → [OFF(0.3sec) → HOT VALVE ON (0.3sec) : ***OPTION***] → OFF(0.3sec) → Rinse VALVE ON(0.3sec) → OFF(0.3sec) → Pump MOTOR ON(0.3sec) → OFF(0.3sec) → MOTOR Left (0.5sec) → OFF(0.5 sec) → MOTOR Right (0.5sec) → OFF(0.3sec) → HEATER RELAY ON(0.3sec) → OFF(0.3sec) → DOOR OPEN (Function continues when door is closed)

2. THERMISTOR TEST MODE

A. Hold down " 1" and " 2" keys simultaneously and then press POWER S/W " 4" on.
(Whole lamps turn on and display show " tl" after 3 Seconds.)

B. Press the " 1" key and display shows " t2"

C. Press the " 3" key and display shows the inside temperature of tub.